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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,944	09/15/2003	Stephen E. Derenzo	IB-1833	2024

8076 7590 05/17/2005

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EXAMINER

KOSLOW, CAROL M

ART UNIT	PAPER NUMBER
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1755

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/662,944	Applicant(s) DERENZO ET AL.	
	Examiner C. Melissa Koslow	Art Unit 1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5,6,8-10,12-15 and 17-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8,12 and 17 is/are allowed.
- 6) ☒ Claim(s) 1,5,6,9,10,13-15,18 and 19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/12/05</u> | 6) <input type="checkbox"/> Other: _____ |

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This action is in response to applicants' amendment of 12 April 2005. Upon further consideration, the rejection of claim 19 over U.S. patent 6,140,669 is withdrawn since the taught composition is different from that claimed in claim 19. Applicant's arguments have been fully considered but they are not persuasive.

Because applicants' representative did not provide evidence information disclosure statement was timely filed, as required by 37 CFR 1.8(b)(3) [see MPEP 711.03(c)(I)(B)], applicants' account 12-0690 is being charged \$130.00, which is the fee set forth in 37 CFR 1.17(p) for filing an information disclosure statement after first action, but before the prosecution is closed.

The information disclosure statement filed 12 April 2005 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because the titles of the articles were not provided as required by 37 CFR 1.98(b)(5). It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609 ¶ C(1).

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 5, 6 and 15 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by U.S. patent 3,602,753.

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Table I teaches a phosphor of CdS:Al,Ag. The aluminum dopant provides electrons and the silver dopant traps holes. The reference teaches the claimed scintillator.

Claims 1, 5, 6, 15 and 18 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by U.S. patent 6,674,098.

Claims 1, 5, 6, 15 and 18 are rejected under 35 U.S.C. 102(b) as being clear anticipated by WO 01/08229.

U.S. patent 6,674,098 is the translation for WO 01/08229.

Both of these references teach ZnO doped with Ga and N (col. 9, lines 30-33). The gallium dopant provides electrons and the nitrogen dopant traps holes. The reference teaches the claimed scintillator.

Claims 1, 9, 10 and 15 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by U.S. 6,140,669.

Table I teaches a phosphor of GaN:Si,Dy and GaN:Si,Er. The silicon dopant provides electrons and the erbium or dysprosium dopant traps isoelectronic holes. The reference teaches the claimed scintillator.

Claims 1, 5, 6, 15 and 19 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by U.S. 5,976,412.

This reference teaches a phosphor of GaN:M,X, where M is Be, Mg, Ca, Sr, Ba, Zn, Cd and Hg and X is C, Si, Ge, Sn and Pb. Examples 1 and 2 teach GaN:Mg,Si and GaN:Mg,Ge. The X dopant provides electrons and the M dopant traps holes. The reference teaches the claimed scintillator.

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Claims 1, 5, 6, 9, 10, 15 and 19 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by U.S. 3,027,329.

This reference teaches a codoped phosphor of GaN (claim 2). The taught primary dopants all provide electrons and the secondary dopant sulfur, selenium and fluorine trap holes. The taught oxygen and tellurium secondary dopants trap isoelectronic holes. The reference teaches the claimed scintillator.

Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent 3,027,329 or U.S. patent 5,976,412.

As discussed above, both of these patents teach the claimed scintillator. In U.S. patent 5,976,412, the amount of the M dopant is in the range of $0.005 \text{ mol}\% < M < 0.7 \text{ mol}\%$ and the amount of X dopant is $0.002 \text{ mol}\% < X < 0.8 \text{ mol}\%$. U.S. patent 3,027,329 teaches the amount of each codopant is in the range of 0.001-1 mol%. All of these ranges overlap the claimed ranges. Product claims with numerical ranges which overlap prior art ranges were held to have been obvious under 35 USC 103. *In re Wertheim* 191 USPQ 90 (CCPA 1976); *In re Malagari* 182 USPQ 549 (CCPA 1974); *In re Fields* 134 USPQ 242 (CCPA 1962); *In re Nehrenberg* 126 USPQ 383 (CCPA 1960). The references suggest the claimed scintillator.

Applicants' amendment to claim 1 does not overcome the rejection since claim 1 is directed to two embodiments, one based on the rejected subject matter of original claim 3 (the scintillator where one codopant provided electrons and the other traps holes) and other one based on the allowable subject matter of original claim 4 (the scintillator where one codopant provided holes and the other traps electrons). The rejections are maintained.

Claims 8, 12 and 17 are allowable for the reasons given in the previous action.

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Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa Koslow whose telephone number is (571) 272-1371. The examiner can normally be reached on Monday-Friday from 8:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo, can be reached at (571) 272-1233.

The fax number for all official communications is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cmk
May 13, 2005


C. Melissa Koslow
Primary Examiner
Tech. Center 1700